

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-140017

(43)Date of publication of application : 23.05.2000

(51)Int.Cl.

A61F 13/56

A61F 5/44

(21)Application number : 10-316347

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(22)Date of filing : 06.11.1998

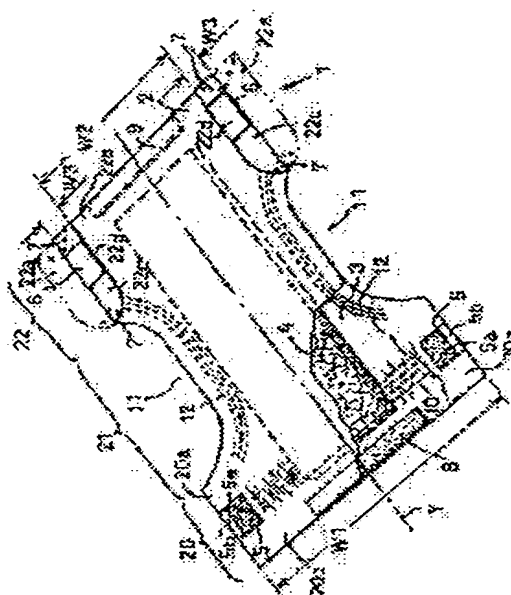
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## (54) DISPOSABLE DIAPER

### (57)Abstract:

PROBLEM TO BE SOLVED: To mutually bind front and rear girth areas of a diaper by one operation separately.

SOLUTION: A pair of first engaging parts 5 is formed on the upper surfaces of both side rim parts 20a and 22a of one of a front girth area 20 and a rear girth area 22 and a pair of second engaging parts 6 is formed on the undersurfaces of both side rim parts 20a and 22a of the other of the front and rear girth areas 20 and 22 to be detachably mounted on the first engaging parts. The other both end rim parts 20a and 22a containing the second engaging parts 6 are folded separately on the top surface of a diaper 1 to be peelably fastened on the top surface.



## LEGAL STATUS

[Date of request for examination]

13.11.2001

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

3510125

[Date of registration]

09.01.2004

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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**CLAIMS**

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[Claim(s)]

[Claim 1] While consisting of a liquid permeability top sheet, a non-liquid-permeable nature backsheet, and an absorbent core that intervenes among both [ these ] sheets and having the circumference region of a forward fuselage assembly, a circumference region of a back drum, and the length-from-the-crotch-to-the-cuff region located between the circumference regions of these order drum in a longitudinal direction It has the edges-on-both-sides section mutually prolonged in parallel to said longitudinal direction, and the edge section before and after extending in parallel mutually crosswise which intersects said longitudinal direction. In the circumference region of said forward fuselage assembly In the disposable diaper of the open sand mold with which the elastic elasticity member prolonged crosswise [ said ] is attached in the state of expanding in said one edges-on-both-sides section top face of the circumference region of said forward fuselage assembly, and the circumference regions of said back drum The 1st engagement section of the pair for concluding the circumference region of said order drum mutually is formed. In said edges-on-both-sides section inferior surface of tongue of another side of the circumference region of said order drum Said diaper characterized by forming the 2nd engagement section of a removable pair in said 1st engagement section, and for each edges-on-both-sides section of said another side containing said 2nd engagement section being turned up by the top face of said diaper, and being attached firmly to said top face possible [ exfoliation ].

[Claim 2] The diaper according to claim 1 with which said 1st engagement section is formed in the side edge section of the circumference region of said forward fuselage assembly, and the 2nd engagement section is formed in the side edge section of the circumference region of said back drum.

[Claim 3] The diaper according to claim 1 with which said 1st engagement section is formed in the side edge section of the circumference region of said back drum, and the 2nd engagement section is formed in the side edge section of the circumference region of said forward fuselage assembly.

[Claim 4] Said 1st engagement section is formed by one member of the mechanical fasteners which consist of a loop-formation member and a hook member. The toe of said member fixes in said one edges-on-both-sides section of the circumference region of said order drum. The diaper according to claim 1 currently formed by the member of another side of the mechanical fasteners with which the heel of said member extends to the method of the outside of said cross direction from the circumference region edges-on-both-sides section of said order drum, and said 2nd engagement section consists of a loop-formation member and a hook member.

[Claim 5]

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**DETAILED DESCRIPTION**

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the disposable diaper of an open sand mold.

[0002]

[Description of the Prior Art] The disposable diaper which concludes each circumference region of an order drum with the adhesive tape fastener of a Uichi Hidari pair is well-known. The toe fixes in the side edge section of the circumference region of a back drum of the body of a diaper, the heel is turned up to the method of the inside of the cross direction of the body of a diaper, and the fastener is installed tentatively possible [ exfoliation ] by the mold release region formed in the side edge section of the circumference region of a back drum. Such a diaper is indicated by JP,60-119944,A, JP,62-243803,A, JP,62-243804,A, etc.

[0003] At the time of wear of a diaper, the adhesion region formed in the heel of a fastener is stuck on the circumference of forward fuselage assembly extra territorial side of the body of a diaper. \*\*\*\*\* of non-adhesiveness which has not applied the binder is formed at the tip of a heel, and attachment actuation of a fastener is made with this \*\*\*\*\*.

[0004]

[Problem(s) to be Solved by the Invention] In these well-known diapers, every [ which is located in the left-hand side and right-hand side of the circumference region of a back drum / of a fastener / either ] is usually stuck by turns. For example, the body of a diaper is pressed down with the right hand, the fastener located in left-hand side is \*\*\*\*(ed) by the left thumb and a left forefinger, and it sticks on a circumference of forward fuselage assembly extra territorial side, next the body of a diaper is pressed down with the left hand, and the fastener located in right-hand side is \*\*\*\*(ed) by the right thumb and a right forefinger, and is stuck on a circumference of forward fuselage assembly extra territorial side.

[0005] Both hands must be used for these well-known diapers when sticking either of the fasteners. Moreover, when sticking another side after sticking one side, it is necessary to change the left hand which was \*\*\*\*(ing) the fastener to the left hand for the right hand which was pressing down the body of a diaper to a right hand, respectively.

[0006] The technical problem of this invention is to offer the disposable diaper which can conclude mutually each circumference region of a diaper order drum by actuation once, without changing actuation of a hand.

[0007]

[Means for Solving the Problem] In order to solve the technical problem mentioned above, a premised place [ this invention ] While consisting of a liquid permeability top sheet, a non-liquid-permeable nature backseat, and an absorbent core that intervenes among both [ these ] sheets and having the circumference region of a forward fuselage assembly, a circumference region of a back drum, and the length-from-the-crotch-to-the-cuff region located between the circumference regions of these order drum in a longitudinal direction It is the disposable diaper of the open sand mold with which it has the edges-on-both-sides section mutually prolonged in parallel to said longitudinal direction, and the edge section before and after extending in parallel mutually crosswise which intersects said longitudinal direction, and the elastic elasticity member

prolonged crosswise [ said ] is attached in the circumference region of said forward fuselage assembly in the state of expanding.

[0008] In this premise, the place by which it is characterized [ of this invention ] In said one edges-on-both-sides section top face of the circumference region of said forward fuselage assembly, and the circumference regions of said back drum The 1st engagement section of the pair for concluding the circumference region of said order drum mutually is formed. In said edges-on-both-sides section inferior surface of tongue of another side of the circumference region of said order drum The 2nd engagement section of a removable pair is formed in said 1st engagement section, and each edges-on-both-sides section of said another side containing said 2nd engagement section is turned up by the top face of said diaper, and it is in being attached firmly to said top face possible [ exfoliation ].

[0009] As a mode of operation of this invention, said 1st engagement section is formed in the side edge section of the circumference region of said forward fuselage assembly, and the 2nd engagement section is formed in the side edge section of the circumference region of said back drum.

[0010] As a mode of other operations of this invention, said 1st engagement section is formed in the side edge section of the circumference region of said back drum, and the 2nd engagement section is formed in the side edge section of the circumference region of said forward fuselage assembly.

[0011] As a mode of other operations of this invention, said 1st engagement section is formed by one member of the mechanical fasteners which consist of a loop-formation member and a hook member. The toe of said member fixes in said one edges-on-both-sides section of the circumference region of said order drum. The heel of said member extends to the method of the outside of said cross direction from the circumference region edges-on-both-sides section of said order drum, and said 2nd engagement section is formed by the member of another side of the mechanical fasteners which consist of a loop-formation member and a hook member.

[0012] As a mode of other operations of this invention, said 1st engagement section is formed with the binder applied to the top face of a synthetic-resin film. The toe of said film fixes in said one edges-on-both-sides section of the circumference region of said order drum. The heel of said film extends to the method of the outside of said cross direction from the circumference region edges-on-both-sides section of said order drum, and said 2nd engagement section is formed with said synthetic-resin film attached in said edges-on-both-sides section inferior surface of tongue of another side of the circumference region of said order drum.

[0013]

[Embodiment of the Invention] It is as follows when the detail of the disposable diaper concerning this invention is explained with reference to an attached drawing.

[0014] Drawing 1 is the partial fracture perspective view of the disposable diaper 1. A diaper 1 The liquid permeability top sheet 2 and the non-liquid-permeable nature backseat 3, It consists of absorbent cores 4 which intervene among both [ these ] the sheets 2 and 3. To a longitudinal direction The circumference region 20 of a forward fuselage assembly, The edges-on-both-sides sections 20a and 22a to which it has the circumference region 22 of a back drum, and the length-from-the-crotch-to-the-cuff region 21 located among the circumference regions 20 and 22 of these order drum, and the circumference regions 20 and 22 of an order drum extend in parallel mutually to a longitudinal direction, It has the both-ends edges 20b and 22b which extend in parallel mutually crosswise which intersects a longitudinal direction.

[0015] In edges-on-both-sides section 20a of the circumference region 20 of a forward fuselage assembly, the 1st engagement section 5 of a pair has extended crosswise [ of a diaper 1 ] along with edge section 20b of the circumference region 20 of a forward fuselage assembly. The 1st engagement section 5 is formed by binder 5a applied to the top face of the piece of a film made of synthetic resin. Binder 5a leaves slightly point 5b located in the crosswise outside of the piece of a film, and is applied. The inferior surface of tongue of the 1st engagement section 5 has fixed on the top sheet 2 in side edge section 20a of the circumference region 20 of a forward fuselage assembly.

[0016] Edges-on-both-sides section 22a of the circumference region 22 of a back drum is

turned up to the top-face side of the top sheet 2 toward the center line Y which bisects the cross direction of a diaper 1 and is prolonged to a longitudinal direction. Turned-up part 22c is attached firmly to the top sheet 2 possible [ exfoliation ] in the punctiform joint 7. In the backseat 3 side of part 22c, the 2nd engagement section 6 has extended crosswise [ of a diaper 1 ] along with edge section 22b of the circumference region 22 of a back drum. The 2nd engagement section 6 is a piece of a film made of synthetic resin, and the inferior surface of tongue has fixed it to the backseat 3 in part 22c.

[0017] The elastic elasticity members 8 and 9 of the shape of a film prolonged crosswise along with those edges in the edge sections 20b and 22b of the circumference regions 20 and 22 of an order drum intervened between the top sheet 2 and the backseat 3, and have fixed in the state of expanding at least to one side of these sheets 2 and 3. Many yarn-like elastic members 10 of the circumference region 20 of a forward fuselage assembly mostly prolonged crosswise into a central part intervened between the top sheet 2 and the backseat 3, and have fixed in the state of expanding at least to one side of these sheets 2 and 3.

[0018] The cavity 11 was formed in each side edge section of the length-from-the-crotch-to-the-cuff region 21 toward the center line Y, and two or more yarn-like elastic members 12 prolonged to a longitudinal direction along with a cavity 11 intervened between the top sheet 2 and the backseat 3, and have fixed in the state of expanding at least to one side of these sheets 2 and 3.

[0019] In order to fix elastic members 8, 9, 10, and 12 on fixing the piece of a film on sheets 2 and 3, or sheets 2 and 3, the technique of the adhesion by hot melt adhesive or thermal melting arrival can be used.

[0020] As for dimension W3 of the cross direction of part 22c in the circumference region 22 of a back drum of this diaper 1, it is desirable that it is in the range of 1-3cm. Moreover, although they can respond the object for adults, and for children and can determine a dimension suitably, when a dimension W1 is in the range which is 26-30cm, it is desirable [ the dimension W1 of the cross direction of the circumference region 20 of a forward fuselage assembly, and the dimension W2 of the cross direction between 22d of ulnar margin of part 22c / a dimension W2 ] that it is in the range of 13-17cm.

[0021] Drawing 2 is an actuation explanatory view when concluding mutually the side edge sections 20a and 22a of the circumference regions 20 and 22 of an order drum, and has omitted the thickness of a diaper 1. The circumference region 20 of a forward fuselage assembly is located in the abdomen 23a side of the wearer 23 who made it lie prone by a diagram, and the circumference region 22 of a back drum is located in a wearer's 23 regions-of-back 23b side. What is necessary is just to put a wearer 23 to sleep, where the elastic member 9 of the circumference region 22 of a back drum is expanded crosswise in order to make part 22c extend from a wearer's 23 regions-of-back 23b to the method of the outside of a longitudinal direction.

[0022] In order to wear a diaper 1, as shown in (A) - (D) of drawing 2, point 5b of the 1st engagement section 5 is \*\*\*\*\*(ed) with a forefinger and the thumb. The 1st engagement section 5 of the circumference region 20 of a forward fuselage assembly is made to engage with the 2nd engagement section 6 of the circumference region 22 of a back drum, resisting the shrinkage force of elastic members 8 and 10, and expanding the circumference region 20 of a forward fuselage assembly to the method of the outside of the cross direction. When part 22c is pulled by the shrinkage force of elastic members 8, 9, and 10 to the upper part of the top sheet 2, part 22c exfoliates in the punctiform joint 7, and is turned up to the method of the outside of the cross direction.

[0023] Drawing 3 is the perspective view of the diaper 1 in a wear condition. If the 1st engagement section 5 and the 2nd engagement section 6 are made engaged, the circumference opening 13 of a drum and the circumference opening 14 of a foot of a pair are formed, elastic members 8, 9, and 10 will contract to a diaper 1, and gathers will be formed in the circumference opening 13 of a drum, the circumference opening 14 of a foot, and the central part of the circumference region 20 of a forward fuselage assembly at it.

[0024] Drawing 4 and 5 are the partial fracture perspective view of the diaper 1 of the mode from which drawing 1 differs, and the perspective view of the diaper 1 in a wear condition. The

tape fastener of the pair made of synthetic resin is attached in edges-on-both-sides section 20a of the circumference region 20 of a forward fuselage assembly. A tape fastener has toe 5c which is located in side edge section 20a, and is prolonged toward a center line Y, and 5d of heels which extend from side edge section 20a to the method of the outside of the cross direction.

[0025] The inferior surface of tongue of toe 5c has fixed on the top sheet 2 in side edge section 20a of the circumference region 20 of a forward fuselage assembly. It leaves point 5b located in the crosswise outside of 5d of heels slightly to a toe 5c and 5d [ of heels ] top face, and loop-formation member 5a of the mechanical fasteners which form the 1st engagement section 5 is attached in it.

[0026] Edges-on-both-sides section 22a of the circumference region 22 of a back drum is turned up toward the center line Y to the top-face side of the top sheet 2. Turned-up part 22c is attached firmly to the top sheet 2 possible [ exfoliation ] in the punctiform joint 7. In the backseat 3 side of part 22c, the 2nd engagement section 6 has extended crosswise [ of a diaper 1 ] along with edge section 22b of the circumference region 22 of a back drum. The 2nd engagement section 6 is hook member 6a of the mechanical fasteners, and hook member 6a is attached in the backseat 3 in part 22c.

[0027] If the 1st engagement section 5 of the circumference region 20 of a forward fuselage assembly and the 2nd engagement section 6 of the circumference region 22 of a back drum are mutually joined according to the sequence shown in drawing 2, the circumference opening 13 of a drum and the circumference opening 14 of a foot of a pair will be formed.

[0028] Drawing 6 is the partial fracture perspective view of the diaper 1 of a different mode in drawing 1 and 4. Edges-on-both-sides section 22a of the circumference region 20 of a forward fuselage assembly is turned up toward the center line Y to the top-face side of the top sheet 2. Turned-up part 20c is attached firmly to the top sheet 2 possible [ exfoliation ] in the punctiform joint 7. In the backseat 3 side of part 20c, the 2nd engagement section 6 has extended crosswise [ of a diaper 1 ] along with edge section 20b of the circumference region 20 of a forward fuselage assembly. The 2nd engagement section 6 is loop-formation member 6a of the mechanical fasteners, and loop-formation member 6a is attached in the backseat 3 in part 22c.

[0029] The tape fastener of the pair made of synthetic resin is attached in edges-on-both-sides section 22a of the circumference region 22 of a back drum. A tape fastener has toe 5c which is located in side edge section 22a, and is prolonged toward a center line Y, and 5d of heels which extend from side edge section 22a to the method of the outside of the cross direction.

[0030] The inside of toe 5c has fixed on the top sheet 2 in side edge section 22c of the circumference region 22 of a back drum. Hook member 5a of the mechanical fasteners which form the 1st engagement section 5 is attached in the top face of toe 6b and heel 6c.

[0031] As for dimension W3 of the cross direction of part 20c in the circumference region 20 of a forward fuselage assembly of a diaper 1, in drawing 6, it is desirable that it is in the range of 1-3cm. Moreover, when the dimension W1 of the cross direction of the circumference region 22 of a back drum is in the range which is 26-30cm, as for the dimension W2 of the cross direction between 20d of ulnar margin of part 20c, it is desirable that it is in the range of 13-17cm.

[0032] Independent or combination (lamination sheet) of a synthetic-resin film, kraft paper, or a nonwoven fabric can be used for a tape fastener.

[0033] The hydrophilic nonwoven fabric formed for the fiber which scoured what processed the hydrophobic nonwoven fabric by the hydrophilization agent, and a hydrophilization agent is used for the top sheet 2. The thermoplastic synthetic-resin film which replaces with these nonwoven fabrics and has puncturing can also be used.

[0034] The lamination sheet of a synthetic-resin film or a synthetic-resin film, and a hydrophobic nonwoven fabric etc. is used for a backseat 3. A core 4 is mixture with the fiber for maintaining the configurations of fluff pulp, a superabsorbency polymer particle or them, and a core 4, it is compressed into necessary thickness and the whole is covered with liquid-permeable sheets, such as a tissue paper.

[0035] It can replace with the top sheet 2 and a non-liquid-permeable nature sheet can also be joined to the part which extends from each side edge of a core 4 to the method of the outside of

the cross direction, and the part which extends from each edge of a core 4 to the method of the outside of a longitudinal direction at a backseat.

[0036]

[Effect of the Invention] According to the disposable diaper concerning this invention, the circumference region of a forward fuselage assembly and the circumference region of a back drum can be once concluded by actuation, \*\*\*\*(ing) the edges-on-both-sides section of the circumference region of a forward fuselage assembly, and expanding the circumference region of a forward fuselage assembly to the method of the outside of the cross direction. Since it is not necessary to change actuation of a hand, the conclusion actuation in the diaper of an open sand mold is easy.

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[Translation done.]

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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] The partial fracture top view of a disposable diaper.

[Drawing 2] The actuation explanatory view when concluding the circumference region of an order drum mutually.

[Drawing 3] The perspective view of the diaper of drawing 1 R> 1 in the condition of having concluded the circumference region of an order drum mutually.

[Drawing 4] The partial fracture top view of the diaper of a different mode from drawing 1 .

[Drawing 5] The perspective view of the diaper of drawing 4 R> 4 in the condition of having concluded the circumference region of an order drum mutually.

[Drawing 6] Drawing 1 , the partial fracture top view of the diaper of a mode which is different in 4.

[Description of Notations]

1 Disposable Diaper

2 Liquid Permeability Top Sheet

3 Non-liquid-permeable Nature Backseat

4 Absorbent Core

5 1st Engagement Section

5c Toe

5d Heel

6 2nd Engagement Section

8 Elastic Member

10 Elastic Member

20 Circumference Region of Forward Fuselage Assembly

20a Side edge section

20c Part

21 Length-from-the-Crotch-to-the-Cuff Region

22 Circumference Region of Back Drum

22a Side edge section

22c Part

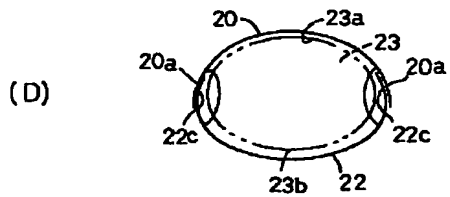
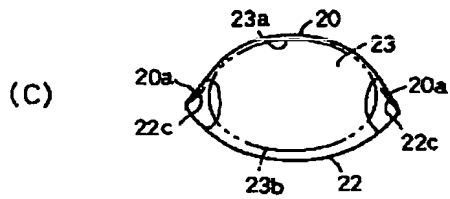
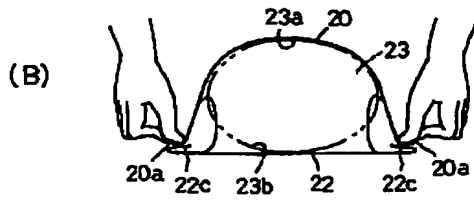
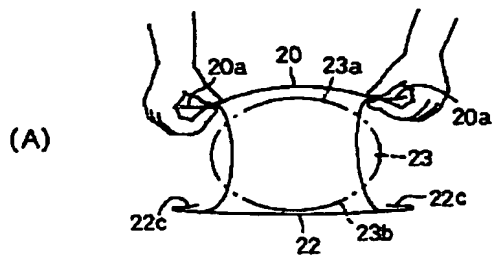
Y Center line

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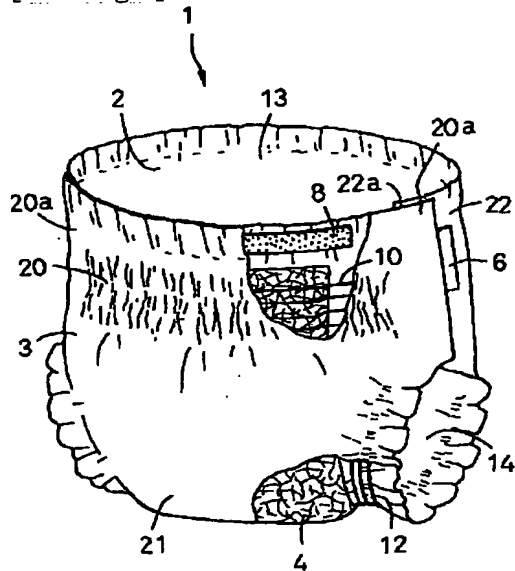
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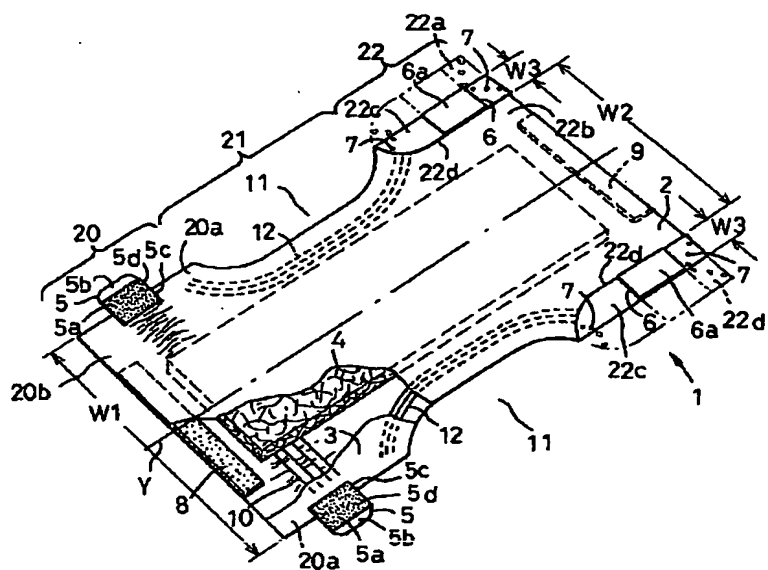




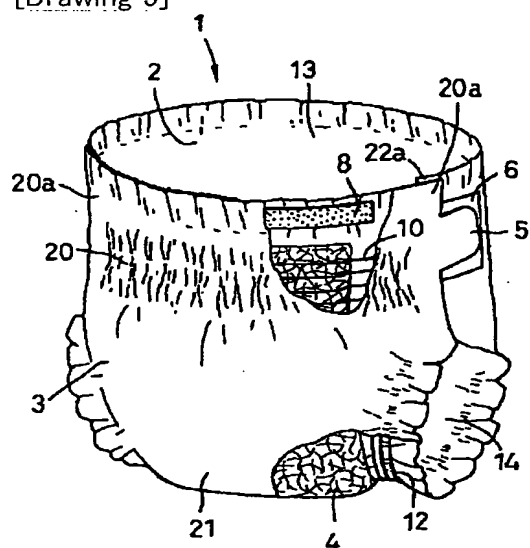
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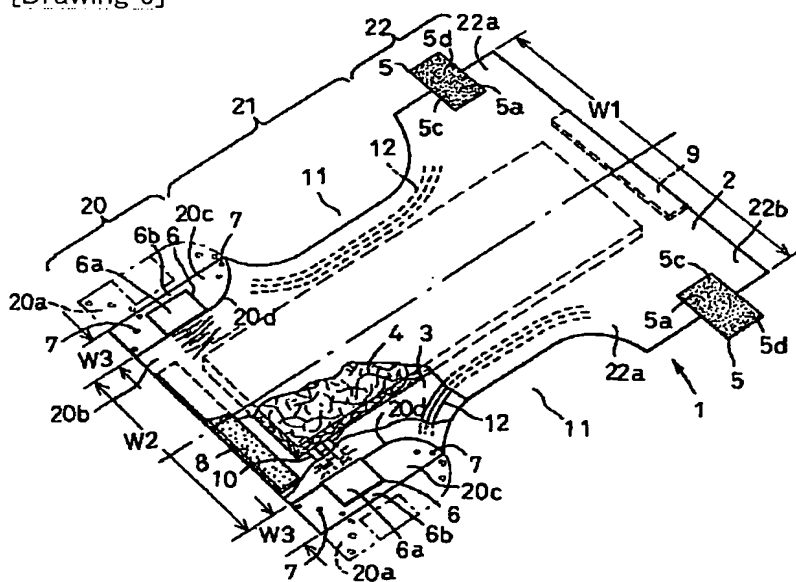
[Drawing 4]



[Drawing 5]



[Drawing 6]



(19)日本国特許庁 (J P)

(12) 公 開 特 許 公 報 (A)

(11)特許出願公開番号

特開2000-140017

(P2000-140017A)

(43)公開日 平成12年5月23日(2000.5.23)

(51)Int.Cl. <sup>7</sup>	識別記号	F I	テ-ロ-ト*(参考)
A 6 1 F 13/56		A 4 1 B 13/02	H 3 B 0 2 9
5/44		A 6 1 F 5/44	H 4 C 0 9 8

審査請求 未請求 請求項の数5 O L (全 6 頁)

(21)出願番号 特願平10-316347

(22)出願日 平成10年11月6日(1998.11.6)

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Fターム(参考) 3B029 BD01 BD03 BD04 BD06 BD09

4C098 AA09 CC01 CC12 CC14 CE07

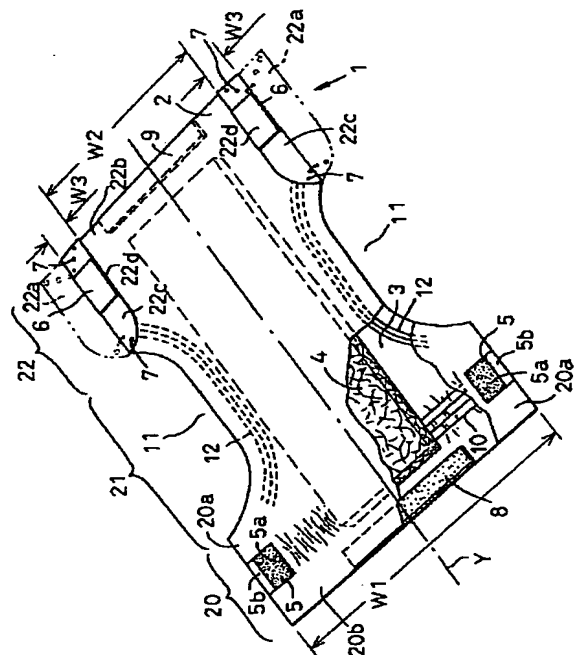
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(54)【発明の名称】 使い捨ておむつ

(57)【要約】

【課題】 一度の操作でおむつの前後胴周り域それぞれを互いに締結させることができる使い捨ておむつを提供する。

【解決手段】 前胴周り域20と後胴周り域22とのうちの一方の両側縁部20a、22a上面には、前後胴周り域20、22を互いに締結するための一対の第1係合部5が形成され、前後胴周り域20、22の他方の両側縁部20a、22a下面には、第1係合部5に着脱可能な一対の第2係合部6が形成され、第2係合部6を含む他方の両側縁部20a、22aそれぞれが、おむつ1の上面に折り重ねられ、上面に剥離可能に止着されている。



## 【特許請求の範囲】

【請求項 1】 透液性トップシートと、不透液性バックシートと、これら両シートの間介在する吸液性コアとで構成され、長手方向に前胴周り域と、後胴周り域と、これら前後胴周り域の間に位置する股下域とを有するとともに、前記長手方向へ互いに並行して延びる両側縁部と、前記長手方向と交差する幅方向へ互いに並行して延びる前後端縁部とを有し、前記前胴周り域には、前記幅方向へ延びる弾性伸縮性部材が伸長状態で取り付けられている開放型の使い捨ておむつにおいて、前記前胴周り域と前記後胴周り域とのうちの一方の前記両側縁部上面には、前記前後胴周り域を互いに締結するための一対の第 1 係合部が形成され、前記前後胴周り域の他方の前記両側縁部下面には、前記第 1 係合部に着脱可能な一対の第 2 係合部が形成され、前記第 2 係合部を含む前記他方の両側縁部それぞれが、前記おむつの上面に折り重ねられ、かつ、前記上面に剥離可能に止着されていることを特徴とする前記おむつ。

【請求項 2】 前記前胴周り域の側縁部に前記第 1 係合部が形成され、前記後胴周り域の側縁部に第 2 係合部が形成されている請求項 1 記載のおむつ。

【請求項 3】 前記後胴周り域の側縁部に前記第 1 係合部が形成され、前記前胴周り域の側縁部に第 2 係合部が形成されている請求項 1 記載のおむつ。

【請求項 4】 前記第 1 係合部が、ループ部材とフック部材とからなるメカニカルファスナのうちの一方の部材で形成され、前記部材の内端部が、前記前後胴周り域の一方の前記両側縁部に固着され、前記部材の外端部が、前記前後胴周り域両側縁部から前記幅方向外方へ延出し、前記第 2 係合部が、ループ部材とフック部材とからなるメカニカルファスナのうちの他方の部材で形成されている請求項 1 記載のおむつ。

【請求項 5】 前記第 1 係合部が、合成樹脂フィルムの上に塗布された粘着剤で形成され、前記フィルムの内端部が、前記前後胴周り域の一方の前記両側縁部に固着され、前記フィルムの外端部が、前記前後胴周り域両側縁部から前記幅方向外方へ延出し、前記第 2 係合部が、前記前後胴周り域の他方の前記両側縁部下面に取り付けられた前記合成樹脂フィルムで形成されている請求項 1 記載のおむつ。

## 【発明の詳細な説明】

## 【0001】

【発明の属する技術分野】本発明は、開放型の使い捨ておむつに関する。

## 【0002】

【従来の技術】前後胴周り域それぞれを粘着性の左右一対のテープファスナで締結する使い捨ておむつは公知である。ファスナは、その内端部がおむつ本体の後胴周り域の側縁部に固着され、その外端部がおむつ本体の幅方向内方へ折り返されて、後胴周り域の側縁部に形成され

た離型域に剥離可能に仮着されている。このようなおむつは、特開昭 60-119944 号公報、特開昭 62-243803 号公報、特開昭 62-243804 号公報等に開示されている。

【0003】おむつの着用時には、ファスナの外端部に形成された粘着域が、おむつ本体の前胴周り域外面に貼着される。外端部の先端には、粘着剤を塗布していない非粘着性の摘持部が形成されており、この摘持部を持ってファスナの貼着操作がなされる。

## 10 【0004】

【発明が解決しようとする課題】これら公知のおむつでは、通常、後胴周り域の左側と右側とに位置するファスナのいずれか一方づつを交互に貼着する。たとえば、右手でおむつ本体を押さえ、左側に位置するファスナを左手の親指と人差指とで摘持して前胴周り域外面に貼着し、次に、左手でおむつ本体を押さえ、右側に位置するファスナを右手の親指と人差指とで摘持して前胴周り域外面に貼着する。

【0005】これら公知のおむつは、ファスナのいずれか一方を貼着するときに、両方の手を使わなければならない。また、一方を貼着した後に他方を貼着するときは、おむつ本体を押さえたい右手を左手に、ファスナを摘持していた左手を右手にそれぞれ換える必要がある。

【0006】本発明の課題は、手の操作を換えることなく、一度の操作でおむつの前後胴周り域それぞれを互いに締結させることができる使い捨ておむつを提供することにある。

## 【0007】

【課題を解決するための手段】前述した課題を解決するために、本発明が前提とするところは、透液性トップシートと、不透液性バックシートと、これら両シートの間介在する吸液性コアとで構成され、長手方向に前胴周り域と、後胴周り域と、これら前後胴周り域の間に位置する股下域とを有するとともに、前記長手方向へ互いに並行して延びる両側縁部と、前記長手方向と交差する幅方向へ互いに並行して延びる前後端縁部とを有し、前記前胴周り域には、前記幅方向へ延びる弾性伸縮性部材が伸長状態で取り付けられている開放型の使い捨ておむつである。

【0008】かかる前提において、本発明の特徴とするところは、前記前胴周り域と前記後胴周り域とのうちの一方の前記両側縁部上面には、前記前後胴周り域を互いに締結するための一対の第 1 係合部が形成され、前記前後胴周り域の他方の前記両側縁部下面には、前記第 1 係合部に着脱可能な一対の第 2 係合部が形成され、前記第 2 係合部を含む前記他方の両側縁部それぞれが、前記おむつの上面に折り重ねられ、かつ、前記上面に剥離可能に止着されていることにある。

【0009】本発明の実施の態様として、前記前胴周り

域の側縁部に前記第1係合部が形成され、前記後胴周り域の側縁部に第2係合部が形成されている。

【0010】本発明の他の実施の態様として、前記後胴周り域の側縁部に前記第1係合部が形成され、前記前胴周り域の側縁部に第2係合部が形成されている。

【0011】本発明の他の実施の態様として、前記第1係合部が、ループ部材とフック部材とからなるメカニカルファスナのうちの一方の部材で形成され、前記部材の内端部が、前記前後胴周り域の一方の前記両側縁部に固着され、前記部材の外端部が、前記前後胴周り域両側縁部から前記幅方向外方へ延出し、前記第2係合部が、ループ部材とフック部材とからなるメカニカルファスナのうちの他方の部材で形成されている。

【0012】本発明の他の実施の態様として、前記第1係合部が、合成樹脂フィルムの上に塗布された粘着剤で形成され、前記フィルムの内端部が、前記前後胴周り域の一方の前記両側縁部に固着され、前記フィルムの外端部が、前記前後胴周り域両側縁部から前記幅方向外方へ延出し、前記第2係合部が、前記前後胴周り域の他方の前記両側縁部下面に取り付けられた前記合成樹脂フィルムで形成されている。

【0013】

【発明の実施の形態】添付の図面を参照して、本発明に係る使い捨ておむつの詳細を説明すると、以下のとおりである。

【0014】図1は、使い捨ておむつ1の部分破断斜視図である。おむつ1は、透液性トップシート2と、不透液性バックシート3と、これら両シート2、3の間に介在する吸液性コア4とで構成され、長手方向に前胴周り域20と、後胴周り域22と、これら前後胴周り域20、22の間に位置する股下域21とを有し、前後胴周り域20、22が、長手方向へ互いに並行して延びる両側縁部20a、22aと、長手方向と交差する幅方向へ互いに並行して延びる両端縁部20b、22bとを有する。

【0015】前胴周り域20の両側縁部20aには、前胴周り域20の端縁部20bに沿って、おむつ1の幅方向へ一対の第1係合部5が延在している。第1係合部5は、合成樹脂製のフィルム片の上に塗布された粘着剤5aで形成されている。粘着剤5aは、フィルム片の幅方向外側に位置する先端部5bをわずかに残して塗布されている。第1係合部5の下面は、前胴周り域20の側縁部20aにおけるトップシート2に固着されている。

【0016】後胴周り域22の両側縁部22aは、おむつ1の幅方向を二等分して長手方向へ延びる中心線Yへ向かってトップシート2の上面の側へ折り重ねられている。折り重ねられた部位22cは、点状接合部7においてトップシート2に剥離可能に止着されている。部位22cのバックシート3の側には、後胴周り域22の端縁部22bに沿って、おむつ1の幅方向へ第2係合部6が

延在している。第2係合部6は、合成樹脂製のフィルム片であって、下面が部位22cにおけるバックシート3に固着されている。

【0017】前後胴周り域20、22の端縁部20b、22bには、それらの端縁に沿って幅方向へ延びるフィルム状の弾性伸縮性部材8、9が、トップシート2とバックシート3との間に介在し、これらシート2、3のうちの少なくとも一方に伸長状態で固着されている。前胴周り域20のほぼ中央部分には、幅方向へ延びる多数の糸状弾性部材10が、トップシート2とバックシート3との間に介在し、これらシート2、3のうちの少なくとも一方に伸長状態で固着されている。

【0018】股下域21の側縁部それぞれには、中心線Yへ向かって凹欠部11が形成され、凹欠部11に沿って長手方向へ延びる複数の糸状弾性部材12がトップシート2とバックシート3との間に介在し、これらシート2、3のうちの少なくとも一方に伸長状態で固着されている。

【0019】シート2、3にフィルム片を固着することやシート2、3に弾性部材8、9、10、12を固着するには、ホットメルト接着剤による接着または熱融着の技術を使用することができる。

【0020】このおむつ1の後胴周り域22における部位22cの幅方向の寸法W3は、1～3cmの範囲にあることが好ましい。また、前胴周り域20の幅方向の寸法W1および部位22cの内側縁22dの間における幅方向の寸法W2は、大人用、子供用に応じて寸法を適宜決定することができるが、寸法W1が26～30cmの範囲にあるときには、寸法W2は13～17cmの範囲にあることが好ましい。

【0021】図2は、前後胴周り域20、22の側縁部20a、22aを互いに締結させるときの操作説明図であり、おむつ1の厚みを省略してある。図では、伏臥させた着用者23の腹部23aの側に前胴周り域20が位置し、着用者23の背部23bの側に後胴周り域22が位置している。部位22cを着用者23の背部23bから左右方向外方へ延出させるには、後胴周り域22の弾性部材9を幅方向へ伸長させた状態で着用者23を寝かせればよい。

【0022】おむつ1を着用するには、図2の(A)～(D)に示すように、第1係合部5の先端部5bを人差指と親指とで摘持する。前胴周り域20を弾性部材8、10の収縮力に抗して幅方向外方へ伸長させながら前胴周り域20の第1係合部5を、後胴周り域22の第2係合部6に係合させる。部位22cが、弾性部材8、9、10の収縮力によってトップシート2の上方へ引っ張られると、部位22cが点状接合部7において剥離し、幅方向外方へ折り返される。

【0023】図3は、着用状態にあるおむつ1の斜視図である。第1係合部5と第2係合部6とに係合させる

と、おむつ1には、胴周り開口13と一對の脚周り開口14とが形成され、胴周り開口13と脚周り開口14と前胴周り域20の中央部分とは、弾性部材8、9、10が収縮して、ギャザーが形成される。

【0024】図4、5は、図1とは異なる態様のおむつ1の部分破断斜視図と、着用状態にあるおむつ1の斜視図である。前胴周り域20の両側縁部20aには、合成樹脂製の一對のテープファスナが取り付けられている。テープファスナは、側縁部20aに位置して中心線Yへ向かって延びる内端部5cと、側縁部20aから幅方向

10 外方へ延びる外端部5dとを有する。  
【0025】内端部5cの下面は、前胴周り域20の側縁部20aにおけるトップシート2に固着されている。内端部5cと外端部5dとの上面には、外端部5dの幅方向外側に位置する先端部5bをわずかに残し、第1係合部5を形成するメカニカルファスナのうちのループ部材5aが取り付けられている。

【0026】後胴周り域22の両側縁部22aは、中心線Yへ向かってトップシート2の上面の側へ折り重ねられている。折り重ねられた部位22cは、点状接合部7においてトップシート2に剥離可能に止着されている。部位22cのバックシート3の側には、後胴周り域22の端縁部22bに沿って、おむつ1の幅方向へ第2係合部6が延在している。第2係合部6は、メカニカルファスナのうちのフック部材6aであって、フック部材6aが部位22cにおけるバックシート3に取り付けられている。

【0027】図2に示す順序に従って、前胴周り域20の第1係合部5と後胴周り域22の第2係合部6とを互いに接合させると、胴周り開口13と一對の脚周り開口

14とが形成される。  
【0028】図6は、図1、4とは異なる態様のおむつ1の部分破断斜視図である。前胴周り域20の両側縁部22aは、中心線Yへ向かってトップシート2の上面の側へ折り重ねられている。折り重ねられた部位20cは、点状接合部7においてトップシート2に剥離可能に止着されている。部位20cのバックシート3の側には、前胴周り域20の端縁部20bに沿って、おむつ1の幅方向へ第2係合部6が延在している。第2係合部6は、メカニカルファスナのうちのループ部材6aであって、ループ部材6aが部位22cにおけるバックシート3に取り付けられている。

【0029】後胴周り域22の両側縁部22aには、合成樹脂製の一對のテープファスナが取り付けられている。テープファスナは、側縁部22aに位置して中心線Yへ向かって延びる内端部5cと、側縁部22aから幅方向外方へ延びる外端部5dとを有する。

【0030】内端部5cの内面は、後胴周り域22の側縁部22cにおけるトップシート2に固着されている。内端部6bと外端部6cとの上面には、第1係合部5を

形成するメカニカルファスナのうちのフック部材5aが取り付けられている。

【0031】図6において、おむつ1の前胴周り域20における部位20cの幅方向の寸法W3は、1～3cmの範囲にあることが好ましい。また、後胴周り域22の幅方向の寸法W1が26～30cmの範囲にあるときには、部位20cの内側縁20dの間における幅方向の寸法W2は、13～17cmの範囲にあることが好ましい。

【0032】テープファスナには、合成樹脂フィルム、クラフト紙や不織布の単独または組み合わせ（ラミネートシート）を使用することができる。

【0033】トップシート2には、疎水性不織布を親水化剤で処理したものや親水化剤を練り込んだ繊維で形成した親水性不織布が用いられる。これら不織布に代えて開孔を有する熱可塑性合成樹脂フィルムを用いることもできる。

【0034】バックシート3には、合成樹脂フィルムまたは合成樹脂フィルムと疎水性不織布とのラミネートシート等が用いられる。コア4は、フラップバルブと高吸収性ポリマー粒子またはそれらとコア4の形状を維持するための繊維との混合物であり、所要の厚みに圧縮され、全体がティッシュペーパー等の透液性シートによって被覆されている。

【0035】コア4の側縁それぞれから幅方向外方へ延出する部分とコア4の端縁それぞれから長手方向外方へ延出する部分とは、トップシート2に代えて不透液性シートをバックシートに接合することもできる。

【0036】

【発明の効果】本発明に係る使い捨ておむつによれば、前胴周り域の両側縁部を摘持し、前胴周り域を幅方向外方へ伸長させながら、一度の操作で前胴周り域と後胴周り域とを締結させることができる。手の操作を換える必要がないので、開放型のおむつにおける締結操作が容易である。

【図面の簡単な説明】

【図1】使い捨ておむつの部分破断平面図。

【図2】前後胴周り域を互いに締結させるときの操作説明図。

【図3】前後胴周り域を互いに締結させた状態にある図1のおむつの斜視図。

【図4】図1とは異なる態様のおむつの部分破断平面図。

【図5】前後胴周り域を互いに締結させた状態にある図4のおむつの斜視図。

【図6】図1、4とは異なる態様のおむつの部分破断平面図。

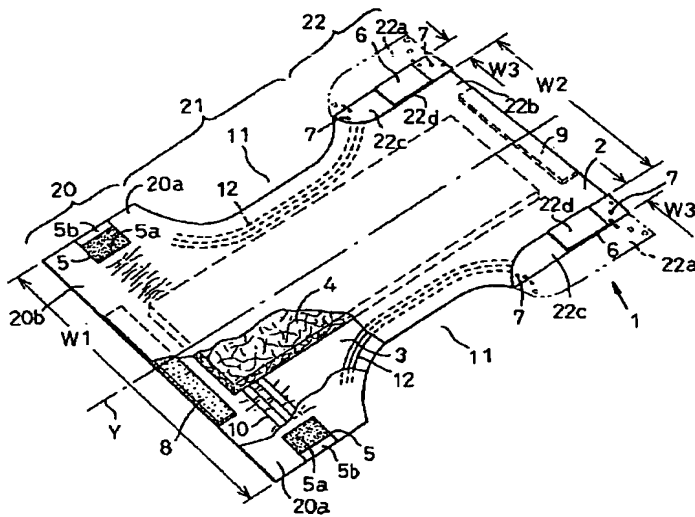
【符号の説明】

1           使い捨ておむつ  
2           透液性トップシート

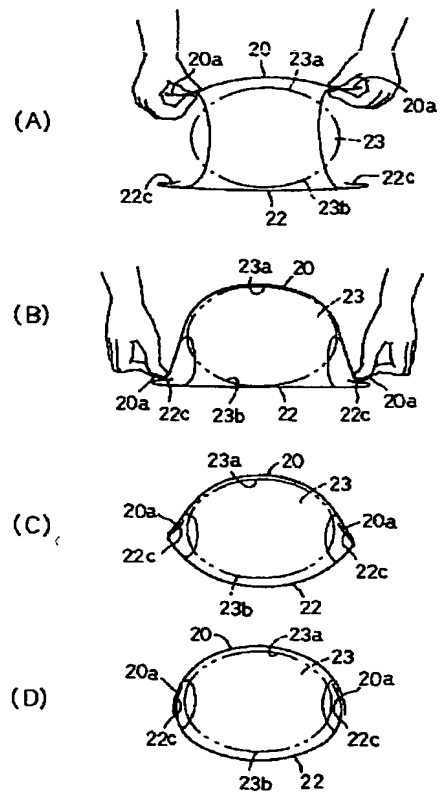
- 3 不透液性バックシート  
 4 吸液性コア  
 5 第1係合部  
 5c 内端部  
 5d 外端部  
 6 第2係合部  
 8 弾性部材  
 10 弾性部材

- \* 20 前胴周り域  
 20a 側縁部  
 20c 部位  
 21 股下域  
 22 後胴周り域  
 22a 側縁部  
 22c 部位  
 \* Y 中心線

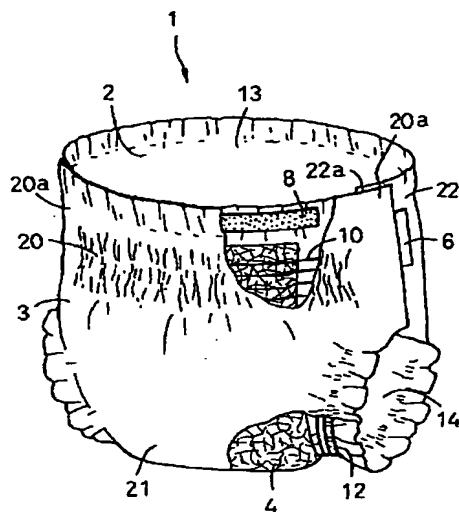
【図1】



【図2】

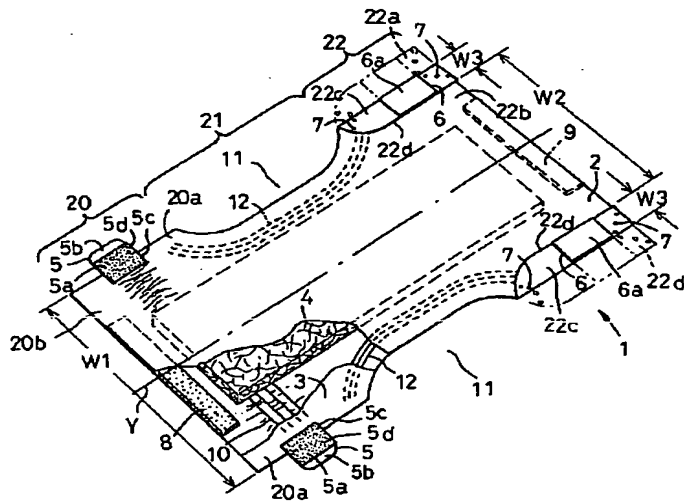


【図3】

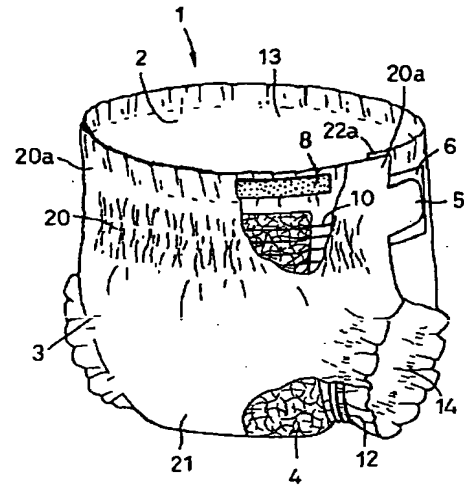




【図4】



【図5】



【図6】

